



# ATARI DEVELOPMENT PARTNER NEWSLETTER

May 1990

This is the first in a (loosely) planned series of articles on compatibility and new TOS computers.

First, let me calm your fears: this article is not a gentle way to say that we have changed everything we possibly could in the TT030 and none of your current software works. That is not the case. The TT030 is painfully similar to an ST. This similarity is carried through to every area of the design. Neither the physical memory locations of registers in chips nor the screen layout have changed.

Some things are unavoidably different. The TT030 has a 68030. We have taken care of software that uses the one instruction that is no longer available in user mode. We patch your code in place, on the fly. This fix does not work for cartridges. The biggest 68030 incompatibility is the difference in stack frames. If your software intercepts or monitors traps, or in some other way depends on the details of the 68000 stack frame, it will not work on the TT030. This does not affect the majority of ST software and you know if you do this kind of stuff and probably knew enough in advance to expect the problem.

The next compatibility issue is also a result of the 68030 directly. In the Mac world they call it "32 bit clean". Some software takes "advantage" of the fact that 68000 address registers are 32 bits but the addresses are only 24 bits. This leaves 8 bits that the 68000 ignores. Well, the 68030 does

not ignore these bits. In the ST these bits are zeros for anything in RAM and either zeros or Fs (depending on sign extension) for I/O. The hardware in the TT030 automatically handles the FFFFxxxx vs 00FFxxxx ambiguity. Any other value in the high order byte will cause the system to either BUS ERROR or go somewhere you probably didn't intend. This, also, is not a problem in most programs (in fact we only know of one and they have been notified). This is a nearly comprehensive list of

don't assume that it will remain the same.

- Don't count on line-f, we never documented it so that we could get rid of it, and we have.

**Now we get to the fun part, the new resolutions.**

Some software works, without modification, in the new screen resolutions and often takes advantage of the extra resolution, extra colors or both. The sorts of things that can cause problems are:

- Using VRO\_CPYFM instead of VRT\_CPYFM is a problem because some programs assume that

resolutions at, or above, 640x400 are always monochrome. Since VRO\_ and VRT\_CPYFM are the same in monochrome the problem didn't appear before.

- Using Getrez() to see if your program can run. As an example, let's say that you absolutely need 80 columns. ▀

## PROGRAMMING FOR COMPATIBILITY

By Leonard Tramiel

the hardware things that will cause working ST programs to fail in ST screen resolutions on the TT030.

The software sorts of things that cause the same class of problems are the same old list that have given trouble to the masochistic few every time we rev the ROMs. I will not dwell (since none of you do these things anymore, if you ever did).

- Don't use undocumented variables.
- Don't mess with the ROMs.
- If you need information from the system header, use the system variable sysbase.
- Use the line-a INIT call to find out the base of the line-a variables and

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## ATARI DEVELOPMENT PARTNER NEWSLETTER

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### CONFIDENTIALITY

The information in this newsletter is confidential. It is for your use in developing products compatible with Atari computers only. You are responsible for protecting the confidentiality of this material in keeping with your Confidentiality Agreement. If you need to reveal some of the information in this newsletter, contact Charles Cherry first to get permission.



## PROGRAMMING FOR COMPATIBILITY

Some people explicitly check `Getrez()` for 1 or 2. If the return is anything else, they say "Get out of low-res" and bail-out. This is lazy. If you need 80 columns, take the character width from `graf_handle` and the xres from `work_out[0]` after the open workstation call and divide. If you got enough characters, great; if not, then give the message and get out.

A similar method may be used for other information. The only portable use of `Getrez()` is to determine `work_in[0]` when doing `v_oprwnk()`. In this case `work_in[0]=Getrez()+2`; This is required to get the right fonts when you do a `vst_load_fonts()` with GDOS. (See the GDOS developers kit for more information)

- Making the assumption that the screen is less than 32K in size will cause serious problems. Although most of this class of error was found with the Monitem, some hold-outs may remain.

- We have thought long and hard about this one and have decided not to extend line-a to support 8 plane software sprites. This is not likely to affect any existing applications, but, just in case, now you know.

### FUTURE ISSUES

We are currently working on some very interesting new system software changes and enhancements that require that a few more things be addressed.

When using GDOS for your multiple font screen display, do not use line-a to get any information on the loaded fonts.

Do not assume that the published font file format is the same as the *in memory* font format.

This reminds me of something important. When doing GDOS applications, the following assumption must be taken into account. Screen fonts are designed assuming that 640 pixels is 7 inches. Among other reasons, this allows for legible 10 point type in 640x200 mode. This works out to be about 91 dpi. Take this into account for all GDOS applications that load screen fonts. Some applications assume 80 dpi and, therefore, WYSIWYG does not work right for them.

Well that's all for this installment, see you soon.♦

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# ATARI SOFTSOURCE™

Dan McNamee

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Atari Softsource™ is now available on GEnie for you to start making your entries. Included this month is a list of the category numbers that are associated with each category. If you do not see one that fits your product, let me know, and I will add it. I must stress that it is vitally important for you to include one of these category numbers in your entry. Searching by category is one of the primary searches for Atari Softsource™, and, if you do not put in a category number, it is unlikely that anyone, other than me, will ever find or see your entry.

When you are making your entries, you need to put in these numbers exactly as they are, otherwise the searching mechanisms will not be able to find your entries, i.e., for an assembler you enter 1101 for the category number and for Business forms you would enter 0100.

Well, that's all for this month... Dan

## **BUSINESS:**

0100 Business Forms  
0101 Commercial Arts  
9900 Data Entry  
9901 Database Management Systems  
9902 Desktop Publishing  
9903 Desktop Publishing Support  
0102 Human Resource Management  
0103 Integrated Productivity  
0104 Invoicing/Order Entry  
0105 Mailing Lists  
0106 Marketing/Sales  
0107 Miscellaneous Business  
0108 Project Management  
0109 Purchasing/Inventory  
0110 Sorting/Merging  
9904 Spreadsheets  
9905 Spreadsheet Support  
0111 Statistics

9906 Taxes  
9907 Telecommunications  
9908 Telecommunications Support  
9909 Time Management  
0112 Time/Client Billing  
9910 Word Processing  
9911 Word Processing Support

## **EDUCATION:**

0200 Administration  
0201 Aptitude Testing/Counseling  
0202 Cognitive Development  
0203 Composition/Grammar  
0204 Computer Literacy  
0205 Computer Tutorials  
0206 Curriculum  
Development/Authoring  
0207 Early Childhood Development  
0208 Geography  
0209 Government/Economics  
0210 History  
0211 Humanities  
0212 Languages  
0213 Library Management/Reference  
0214 Math  
0215 Miscellaneous Education  
0216 Reading/Vocabulary  
0217 Science  
0218 Social Sciences  
0219 Special Education  
0220 Speed Reading  
0221 Spelling  
0222 Typing Tutorials  
0223 Vocational/Business Skills

## **ENTERTAINMENT/ PERSONAL:**

0300 Adult  
0301 Adventure  
0302 Animation/Movie Making  
0303 Arcade/Simulation  
0304 Astrology/Divination  
0305 Career Development  
0306 Cooking/Diet  
0307 Electronic Publications

0308 Financial/Legal  
0309 Gambling  
0310 Genealogy/Family History  
0311 Health/Self-Improvement  
0312 Hobbies  
0313 Household Management  
0314 Miscellaneous Personal  
0315 Miscellaneous Entertainment  
0316 Music  
0317 Sports  
0318 Sports/Games  
0319 Strategy  
0320 Travel

## **FINANCIAL:**

0400 Accounting-Fixed Asset  
0401 Accounting-General Ledger  
0402 Accounting-Integrated Systems  
0403 Accounts Payable/Check Writing  
0404 Accounts Receivable  
0405 Financial Forecasting/Modeling  
0406 Investment Management  
0407 Miscellaneous Financial  
0408 Payroll

## **HARDWARE:**

0500 Accelerators  
0501 Emulators  
0502 Mass Storage  
0503 Graphic Boards/Frame  
Buffers/Video Adapters  
0504 Memory Expansion  
0505 Miscellaneous Hardware

## **INDUSTRIES/VERTICAL MARKETS:**

0600 Aerospace  
0601 Agriculture  
0602 Automotive  
0603 Aviation  
0604 Chemical  
0605 Computer-Aided Design(CAD)  
0606 Computer-Aided Manufacturing  
(CAM) ■

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## INDUSTRIES/VERTICAL MARKETS CONTINUED

0607 Construction/Contracting  
0608 Energy (Oil/Gas/Alternative/Etc)  
0609 Engineering (Civil/Structural)  
0610 Engineering  
    (Electrical/Electronic)  
0611 Engineering (Mechanical)  
0612 Engineering (Miscellaneous)  
0613 Inventory Industries  
0614 Lumber  
0615 Manufacturing  
0616 Mining  
0617 Miscellaneous Industries  
0618 Surveying  
0619 Transportation

## MUSIC/MIDI:

0700 Composing  
0701 Cue Sheets  
0702 Educational  
0703 Interface  
0704 Librarian  
0705 Mixing  
0706 Miscellaneous Music/MIDI  
0707 Patch Editor  
0708 Player  
0709 Sample Editor  
0710 Scoring  
0711 Sequencer  
0712 Sounds  
0713 Utility

## PERSONAL PRODUCTIVITY:

9900 Data Entry  
9901 Database Management Systems  
9902 Desktop Publishing  
9903 Desktop Publishing Support  
0800 Fonts/Images  
0801 Graphics

0802 Graphics Support  
0803 Miscellaneous Productivity  
9904 Spreadsheets  
9905 Spreadsheet Support  
9906 Taxes  
9907 Telecommunications  
9908 Telecommunications Support  
9909 Time Management  
9910 Word Processing  
9911 Word Processing Support

## PROFESSIONS/SERVICES:

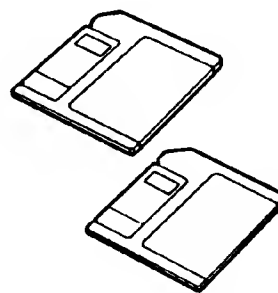
0900 Architecture/Interior Design  
0901 Banking  
0902 Communications/Media  
0903 Food/Restaurant  
0904 Government/Municipalities  
0905 Hospital Management  
0906 Hotel/Motel  
0907 Insurance  
0908 Leasing/Rental  
0909 Legal  
0910 Medical (Diagnosis/Analysis)  
0911 Medical/Dental Office  
    Management  
0912 Miscellaneous  
    Professions/Services  
0913 Non-Profit Associations  
0914 Pharmaceutical  
0915 Public Utilities  
0916 Publishing/Printing  
0917 Real Estate/Property  
    Management  
0918 Recreation  
0919 Retail/Wholesale  
0920 Veterinary Practice

## SCIENCES:

1000 Astronomy  
1001 Biology  
1002 Chemistry  
1003 Earth  
1004 Environment  
1005 Mathematics  
1006 Miscellaneous Sciences  
1007 Nuclear  
1008 Physics

## SYSTEM APPLICATIONS/ PROGRAMMING:

1100 Artificial Intelligence/Expert  
    Systems  
1101 Assemblers  
1102 System Emulation  
1103 Compilers/Interpreters/Languages  
1104 Conversions/Cross Compilers  
1105 Device/Utility Controllers  
1106 Diagnostics/Analysis  
1107 Information Retrieval  
1108 Operating Systems  
1109 Program/Report Generators  
1110 Programming Development  
1111 Security/Encryption  
1112 System Administration  
1113 System Utilities



## PRESS DATABASE

On this month's disk, you will find a file called Press. This file contains press contacts and other information on various magazines.

Each field is separated by a comma and each record is separated by a carriage return-line feed.

The following describes each field.

### MAGAZINE NAME

This is the name of the publication.

### COMPANY NAME

This is the name of the Publisher which may be different from the magazine's name.

### STREET ADDRESS, CITY, ZIP, COUNTRY

This is the mailing address of the publication.

### PHONE NUMBER

This is the business phone at the office.

### FAX NUMBER

You can send your press releases and announcements much faster by fax.

### REVIEWS EDITOR

Send review copies of your product here.

### PRESS RELEASES

This is your contact to send any press releases on product roll-outs, new and improved products, etc.

FIELD	TYPE	SIZE
MAGAZINE NAME	TXT	30
COMPANY NAME	TXT	30
STREET ADDRESS	TXT	30
CITY	TXT	20
STATE	TXT	20
ZIP	TXT	20
COUNTRY	TXT	20
PHONE	TXT	20
FAX	TXT	20
PUBLISHER	TXT	20
EDITOR	TXT	20
NEW PROD.EDITOR	TXT	20
REVIEWS EDITOR	TXT	20
PRESS RELEASES	TXT	20
ADVERTISE SALES	TXT	20
HOME PHONE	TXT	20
COMPUTER	TXT	20

### ADVERTISING SALES

This is your contact when you are planning to advertise in their publication.

### HOME PHONE

You can reach the contact person at home.

### COMPUTER

Lists the computers the magazine is targeted at.

As we acquire updates and new Press information to existing fields, we will pass this information on to you.

If I have missed any category or need to add or delete any

magazines, please drop me a line at the address below.♦

### ATARI CORPORATION

P.O. Box 3427  
Sunnyvale, CA 94088-3427

Attn: Kimberly Metcalf

## SO FAR...Charles Cherry

### ATARI SOFTSOURCE™ LAUNCHED!

Atari Softsource™ was launched with a Saturday night developers' party at the World of Atari Show in Anaheim. GENie is the on-line service for Atari Softsource™ and we were on line, live. While the assembled developers munched on barbecued ribs, Atari Softsource™ Administrator Dan McNamee typed in the first listing (MT C-Shell) as David Beckmeyer of Beckmeyer Development provided the information. It was an exciting evening, the culmination of months of hard work putting Atari Softsource™ together.

Atari Softsource™ is open to developers now. You'll find it in the Atari Developers' Round Table (ATARIDEV) on GENie. You should list your products and upload your demos as quickly as possible. Time is slipping by quickly and any listings which are not posted by the end of June, won't make it onto the first CD ROM.

Atari Softsource™ will make the long, often difficult, summer months a lot happier for the developers who take advantage of it. It is the most important thing you can do to boost sales in the third quarter.

Do it now, don't put it off. ■

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## SO FAR...

### DEMONSTRATOR CREDITS

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In the rush to get Demonstrator into the April Newsletter, I left out some important credits in the documentation file. Demonstrator is a powerful tool and is at the heart of Atari Software. It's appropriate to thank the people who made it possible.

Demonstrator was developed by:

Legend Software Systems  
3508 - 34A Avenue  
Edmonton Alberta T6L 5E8  
Canada

### STE NEWS

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We should have a shipment of 1040 STEs by the time you read this. They are developer priced the same as 1040 STs. I encourage you to get one so that you can develop for the larger color palette, digital sound, analog joysticks, etc. Call Gail Johnson to confirm availability and then send in your orders.

We will get new STE TOS ROMs for those developers who bought the prototype STEs. This will correct the bugs in your machines and bring you up to date with the release ROMs. Call Gail Johnson if you need this upgrade.

### THIS MONTH'S BONUS

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The enclosed disk has a new Resource Construction Set, a disk utility, and a database of press contacts. It is part of a program to update your Developer Kits. Replace your old RCS (probably RCS3) with the new one (RCS8). Add the disk utility (CHKDISK) to your utilities disk.

Also included are updated AHDI 3.00 Release Notes and new documentation for CHKDISK. Replace your old AHDI 3.00 Release Notes (probably dated May 4, 1989) with the new ones (dated April 18, 1990). Add the CHKDISK documentation to your kit.

Next month, we will give you a complete listing of the current Developers Kit and instructions on bringing yours up to date.♦

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